

IN THE CLAIMS

Please amend the claims as follows:

Claims 1-9 (Canceled).

Claim 10 (New): A fuel-cell stack comprising:

at least two elementary cells disposed in facing relationship, for an exothermic combustion reaction constituting a heat source;  
an internal duct formed between the cells for circulation of a cooling fluid constituting a cold sink; and

a plurality of thermoelectric modules, each comprising a pair of elements of two conductive materials of dissimilar nature, a first end of each pair being in thermal contact with the heat source or the cold sink, a second end of each of the elements of the pair being in contact with the other source or sink, and being electrically connected to a neighboring module.

Claim 11 (New): A fuel-cell stack according to claim 10, wherein the thermoelectric module is composed of a pair of conductive materials connected at one of their ends to a conductive connection in thermal contact with a plate of the heat source, and connected to one another at their free ends by a conductive connection in thermal contact with the cold sink.

Claim 12 (New): A fuel-cell stack according to claim 10, wherein the two conductive materials of the thermoelectric modules are semiconductor materials, a first of P type and a second of N type.

Claim 13 (New): A fuel-cell stack according to claim 12, wherein the N-type materials are alloys of silicon and germanium doped with phosphorus and the P-type materials are alloys of silicon and germanium doped with boron.

Claim 14 (New): A fuel-cell stack according to claim 10, wherein the conductive connections connecting the ends of the materials are composed of molybdenum electrodes.

Claim 15 (New): A fuel-cell stack according to claim 10, wherein a last thermoelectric module of an assembly disposed along a first elementary cell is electrically connected in series or in parallel with a first thermoelectric module of an assembly disposed along a second elementary cell.

Claim 16 (New): A fuel-cell stack according to claim 10, wherein a plate forming a wall equipped with fins is disposed on the external surface of the assembly of thermoelectric modules on a same side as the internal cooling duct.

Claim 17 (New): A method for partial recuperation of thermal energy originating from a fuel-cell stack, in an interior of which there circulates, between two elementary cells of the fuel-cell stack constituting the heat source, a cooling fluid constituting the cold sink, wherein the cooling fluid is placed in thermal contact with a plurality of thermoelectric modules and the electrical energy generated by Seebeck effect is recuperated.

Claim 18 (New): A method according to claim 17, wherein cooling of the cell stack is two-phase.